

TO: Distribution

June 2, 1989

FROM: Daesoo Han

SUBJECT: MODIS Data Study Team Minutes for May 26

ATTENDEES:	Mike Andrews	GSC	953-2700
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	Dave Folta	GSC	953-2700
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	Robin Tomlinson	RDS	982-3738

NEXT MEETING: The next meeting of the MODIS Data Study Team will be held at 9:00 AM, Friday, June 2, in Building 28, Room W125.

TOPICS:

1. The overall calibration accuracy goal established for the MODIS-T instrument is plus or minus 2 percent of actual value. The required accuracy is plus or minus 2 percent for bands up to 1 micron, plus or minus 3 percent for bands in the 1-3 micron range, and plus or minus 1 percent for bands greater than 3 microns in wavelength. The corresponding requirement for the MODIS-N instrument is plus or minus 2 percent in the visible reflectance bands, plus or minus 3 percent in the polarization channels, and plus or minus 1 percent in the thermal bands.

2. A meeting with Skip Reber to discuss UARS data processing has been arranged for 9:00 on Wednesday, June 21. The meeting will take place in the usual MODIS Data Team meeting room.

3. An expanded MODIS Level-1 processing context diagram was presented for review and discussion. The diagram shows separate processing flows for MODIS-N and MODIS-T data and it includes specific data flows for system control data, platform time correction (if required), instrument geometric correction coefficients, instrument radiometric calibration coefficients, a land/ocean mask, terrain elevation data, and standard atmospheric refraction corrections, as well as instrument science and engineering data and platform ancillary data returned from the platform. Besides earth-located radiance values, the processing generates an instrument response history and a radiometric calibration support product containing radiometric calibration data.

4. A Level-1 processing functional allocation diagram was presented. The four main steps in Level-1 processing are Receive Instrument Data, Earth Locate Pixels, Generate Calibrated

Radiances, and Format Output Products. The major processing steps in the Receive Instrument Data function are the ingestion of received data, the verification of data transmission quality between the instrument and the CDHF, the verification of MODIS instrument operation (may be rudimentary), the sorting and reformatting of data, and appending of data description headers. The Earth Locate Pixels function consists of applying a time correction (if required), computing observation geometry for selected "anchor points", computing an atmospheric refraction correction, setting a land/ocean flag for each pixel, applying a terrain elevation correction, and applying Data Quality Assurance (DQA) criteria provided by science team members.

In the early stages of definition, Generate Calibrated Radiances processing will allow the possibility of a separate calibration for each physical detector element in the instrument. Processing steps include the identification of the detector element generating an observation, the application of calibration equations, and the application of DQA criteria for the radiance generation process. The Format Output Products phase of processing consists of the creation of output data blocks and the generation and attachment of metadata to the output products.

5. Interface control requirements for MODIS Level-1 processing were examined and a preliminary definition of the Interface Control Documents that will be needed to specify Level-1 processing was presented. Interfaces that will provide required data and information for Level-1 processing have been previously identified in the EosDIS interface documents, the MODIS requirements document, and the EosDIS/MODIS Interface Comparison Document. Required items in the ICDs are classified either as critical or common. Critical components are those that should be identified and agreed to by each interface source. Common components are those that routinely apply to all interfaces.

An outline showing suggested content was provided for each proposed document. Data content and format are primary items for each interface; depending on the interface, additional items such as physical data description, syntax, data rates and volume, data transmission schedules and timeliness constraints, and storage and access information may be included.

6. A revised wallchart showing the general flow of data to produce core MODIS data products was distributed. The chart includes the expanded data flows developed for Level-1 processing as well as a number of changes in the list of items included as core products. Further changes are anticipated as science team members refine their list of proposed products and as the interrelationships of various products are further defined.

7. A revised version of the "List of MODIS Team Members and Supporting Staff Interested in Calibration" was distributed. The revised list corrects several errors in the previous version.